NORTH DAKOTA
DEPARTMENT *of* HEALTH

Health Alert Network

JULY 8, 2005

HEALTH ADVISORY

Bovine Anthrax Discovered in Ransom County, N.D.

Health-Care Providers Asked To Monitor Patients Who Work With Livestock

On July 6, 2005, the North Dakota State Veterinarian announced two cases of anthrax in cattle in Ransom County, N.D. Although the risk of people acquiring anthrax while working with anthrax-infected livestock is low, health-care providers should increase their suspicion of anthrax when seeing patients who work with livestock and who present with compatible symptoms. The cutaneous form of the disease is the most common among people exposed to animals.

The recent bovine cases are reported from an area of North Dakota that was involved in an anthrax epizootic in 2000. One case of human cutaneous anthrax associated with this epizootic was reported in August of 2000. This individual was successfully treated with ciprofloxacin.

Human anthrax generally takes three forms, depending upon the route of exposure. Human anthrax is rarely spread from person to person.

- **Inhalational anthrax** rarely occurs naturally in the United States and is the most serious form of the disease. Early symptoms are nonspecific and flu-like, with rapid development of respiratory distress with mediastinal widening present on chest x-ray.

- **Gastro-intestinal anthrax** occurs after ingestion of flesh from anthrax-infected animals. Symptoms can include diarrhea, bloody diarrhea and fever. Septicemia and death may follow.

- **Cutaneous anthrax** occurs when anthrax bacteria or spores enter through an opening in the skin. A papular lesion, which is often itchy, will develop, followed by a vesicular lesion. After two to six days, a black eschar will develop. There may be moderate to severe edema with the eschar. Infection can spread into regional lymph nodes and to the blood stream, causing an overwhelming septicemia. Untreated cutaneous anthrax has a 5 percent to 20 percent fatality rate. Early and successful treatment does not alter the course of the skin lesions, but will make them noninfectious after 24 hours of antibiotic therapy.

  Appropriate diagnostic specimens for cutaneous anthrax include aseptically collected vesicular fluid or eschar material. Eschar material can be collected by carefully lifting the outer edge of the eshcar and inserting a sterile swab underneath to collect the material without removing the eschar. Other specimens that can be collected, if clinically indicated, include blood or CSF. Acute and convalescent serum samples also should be collected.

Post-exposure antibiotic prophylaxis is indicated only after an intentional release of anthrax spores such as in a terrorist attack.

Treatment recommendations for anthrax include doxycycline 100 mg BID x 60 days or ciprofloxacin 500 mg BID x 60 days. Children and pregnant women can be treated with amoxicillin after susceptibility data becomes available.

Providers who suspect anthrax in humans should report these cases immediately to the North Dakota Department of Health by calling 800.472.2180. Additional information about specimen collection or treatment also can be obtained by calling this same number. More information about anthrax can be found on the following websites:

- Centers for Disease Control and Prevention – www.bt.cdc.gov/agent/anthrax/anthrax-hcp-factsheet.asp
- American Academy of Dermatology – www.aad.org/professionals/educationcme/bioterrorism/CutaneousAnthrax.htm.

Categories of Health Alert messages:

- *Health Alert conveys the highest level of importance; warrants immediate action or attention.*
- *Health Advisory provides important information for a specific incident or situation; may not require immediate action.*
- *Health Update provides updated information regarding an incident or situation; no immediate action necessary.*
- *Health Information provides general information that is not necessarily considered to be of an emergent nature.*

This message is being sent to local public health units, clinics, hospitals, physicians, tribal health, North Dakota Nurses Association, North Dakota Long Term Care Association, North Dakota Healthcare Association, North Dakota Medical Association, and hospital public information officers.